

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

COUNTRY East Germany

REPORT

SUBJECT Endikon Image Convertor in Production DATE DISTR.
at VEB Werk fuer Fernmeldewesen, Berlin-
Oberschoeneweide NO. PAGES 1

17 JAN 1958

REQUIREMENT
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REFERENCES

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

pamphlet published by VEB 50X1-HUM
Werk fuer Fernmeldewesen, Berlin-Oberschoeneweide, which describes
the Endikon image convertor. The Endikon image convertor was in produc-
tion at the Oberschoeneweide plant as of December 1957 although there
was a high percentage of rejections. This pamphlet is unclassified
when detached.

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(Section indicated by "X"; Field distribution by "#".)

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18 March 1958

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EAST GERMAN BROCHURE ON A TV CAMERA TUBE -- ENDIKON F 2.5 M 1

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EAST GERMAN BROCHURE ON A TV CAMERA TUBE -- ENDIKON F 2.5 M 1

Informationsblatt Endikon F 2.5 M 1
[Brochure on the Endikon F 2.5 M 1]
Berlin-Oberschoeneweide

Unsigned

The Endikon F 2.5 M 1 is a television camera tube with a sensitivity which permits image pickup even under normal lighting conditions. It is used especially in television cameras used for industrial purposes.

It consists of a cylindrical glass tube with noctovision scanning and a blocking layer. Because of the simple construction, the external dimensions are comparatively small.

The Endikon tube is interchangeable with the American Vidicon and the West German Rегистрон tubes.

Weight ca 50 g
Mounting equipment-bound "Гераetegebunden"

Noctovision Scanning

Heating voltage	U_f	6.3 v
Heating current	I_f	0.3 a
Heating-up period	t_A	60 seconds
Oxide cathode, indirectly heated.		
Plate potential	U_a	200...300 v
Potential at grid 2	U_{g2}	300 v
Grid blocking potential	U_{gl}	-30...-100 v
Cathode current, optimum	I_k	$\leq 150 \mu a$

Photo Blocking Layer

Photo blocking-layer substance		antimony trisulfide $_{MM}^{? ?}$
Size of image	max	9.6 x 12.8
Maximum spectroscopic sensitivity		540...560 $[\text{?}] \mu$
Signal current at 50 lux on a photocathode area of 9.6 x 12.8 mm	I_{sig}	$\geq [\text{?}] \mu\text{a}$
Signal plate grid-potential	U_p	$\dots 100 \text{ V}$ \swarrow negative? ?
Resolving power		≥ 400 lines

Beam Deflection

Deflection		magnetic
Picture coil		ca 24 AW
Line-sweep coil		ca 27 AW
Focusing		magnetic
Focusing coil		ca 300 AW
Beam adjustment		correcting magnet

Capacitances

Signal electrode -- all other electrodes	$c_{\text{sig}/-}$	ca 7 mmf
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Operating Conditions and Directions

The word illegible operating and storage temperature is 60° C . Endikon tubes are to be stored in the dark (packing) and must be protected from exposure to strong light (sun light) after having been unpacked.

Endikon tubes will be shipped and stored only in the original packing, with the photosensitive layer up.

Upon introduction of the required voltages, the Endikon tube will be ready for operation after 60 seconds to heat up the cathode of the emission system.

Proper switching precautions must be taken to prevent overloading the semi-conductor layer with the beam current (for example, when switching the apparatus on or off or in case of failure of the beam deflector). In the optical reproduction one should bear in mind that the photographic layer is located behind a plance glass disk [one or more figures illegible] \neq 0.5mm thick.

The signal current value listed in the data sheet is reached during optimum adjustment.

For faultless operation the Endikon tube must be properly shielded from static and magnetic interference fields.

The angle of inclination of the Endikon tube within the camera should never exceed 45°.

The electron spot must be adjusted for uniform illumination of the photo-sensitive layer and maximum emission.

When the lens is closed, the potential at the signal electrode must be adjusted so as to produce the best signal and a uniform background. Then the lens can be opened or the lighting on the scene increased until a good image impression is obtained. Pay no attention to moving objects.

The new raster [Raster] should always be traced in a predetermined raster on the photosensitive layer.

If the lighting conditions are unfavorable, a slight [word illegible] shows up in the television image of the moving objects. This phenomenon is a fuctionally determined characteristic of the Endikon tube and can be corrected almost completely by stronger illumination of the scene and simultaneous reduction of the plate grid-potential [Plattenvorspannung].

The tube is in the developmental stage. We reserve the right to introduce minor changes when the transition to regular production is made.

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